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# SCIENCE

A WEEKLY JOURNAL DEVOTED TO THE ADVANCEMENT OF SCIENCE, PUBLISHING THE  
OFFICIAL NOTICES AND PROCEEDINGS OF THE AMERICAN ASSOCIATION  
FOR THE ADVANCEMENT OF SCIENCE.

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FRIDAY, JANUARY 2, 1903.

THE AMERICAN ASSOCIATION FOR THE  
ADVANCEMENT OF SCIENCE.

## THE SCIENCE OF ASTRONOMY.\*

I TAKE for the subject of my address the science of astronomy, and propose to give a brief historical sketch of it, to consider its future development, and to speak of the influence of the sciences on civilization.

The science of astronomy is so closely connected with the affairs of life, and is brought into use so continuously and in such a systematic manner, that most people never think of the long labor that has been necessary to bring this science to its present condition. In the early times it was useful to the legislator and the priest, for keeping records, the times of public ceremonies and of religious festivals. It slowly grew into the form of a science, and became able to make predictions with some certainty. This was many centuries ago. Hipparchus, who lived 150 B.C., knew the periods of the six ancient planets with considerable accuracy. His periods are:

|         | Period.               | Error $\times 100$<br>Period. |
|---------|-----------------------|-------------------------------|
| Mercury | 87 <sup>d</sup> .9698 | + 0 <sup>a</sup> .0007        |
| Venus   | 224.7028              | + 0.0009                      |
| Earth   | 365.2599              | + 0.0010                      |
| Mars    | 686.9785              | - 0.0002                      |
| Jupiter | 4332.3192             | - 0.0061                      |
| Saturn  | 10758.3222            | - 0.0083                      |

\* Address of the President of the American Association for the Advancement of Science, Washington meeting, December 29, 1902.

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| Shorter Articles :—  |    |
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MSS. intended for publication and books, etc., intended for review should be sent to the responsible editor, Professor J. McKeen Cattell, Garrison-on-Hudson, N. Y.

ciliation of the originally level shores of these lakes.

The latest completed geologic period, when an ice sheet covered the northern half of our continent, is being very satisfactorily investigated, both in the United States and Canada. As in an earlier monograph of this series, on the glacial Lake Agassiz, it will be an advantage to the geological surveys of each country that these detailed explorations about the Great Lakes be extended to give such full description and discussion of the ancient larger lake areas, with their shore lines and relations to the waning ice sheet, on both sides of the international boundary.

WARREN UPHAM.

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#### SCIENTIFIC JOURNALS AND ARTICLES.

*Bird Lore* for November-December contains articles 'On Journal Keeping,' by Ernest Thompson Seton; 'Flamingoes' Nests,' illustrated, by Frank M. Chapman; 'The Weapons of Birds,' by F. A. Lucas; and 'Whiskey John in Colorado,' by E. R. Warren. The seventh paper on 'How to Name the Birds' is devoted to the *Sylviidae* and *Turdidae* and the first paper on 'How to Study Birds' are both by Frank M. Chapman. There is the first of a series of portraits of *Bird Lore*'s advisory councilors depicting Messrs. William Dutcher, T. Gilbert Pearson, Lynds Jones and C. W. Nelson, and the usual notes, reviews and reports of societies.

*The Museums Journal* of Great Britain for November has an article on museum matters presented at the Belfast meeting of the British Association, and description of a dust-proof air inlet for museum cases, a feature entirely too much neglected in the construction of cases. F. A. Bather discusses 'Names on the Labels in Public Galleries,' in which he touches on the difficulties of providing so-called common names for objects and intimates that scientific names are much more generally understood than is often supposed. This article should be widely read. There is an interesting series of notes concerning museums in various parts of the world.

THE *American Museum Journal* for December gives a summarized account of the proceedings of the Thirteenth International Congress of Americanists, a review of the recent work of the museum, and a list of the December lectures. The number contains the index for Volume II.

*The Plant World* for October contains 'Extracts from the Note Book of a Naturalist on the Island of Guam,' by W. E. Safford; 'A Study of the Island Flora of the Mississippi River near Sabula, Iowa,' by T. J. and M. F. L. Fitzpatrick, and the second article on the 'Origin of Plant Names,' by Grace S. Niles. Among the shorter articles are the official announcements of the Wild Flower Preservation Society.

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#### SOCIETIES AND ACADEMIES.

##### PHILOSOPHICAL SOCIETY OF WASHINGTON.

THE 558th regular meeting was held November 22, 1902.

Dr. H. Carrington Bolton presented a paper on 'Science and Art under Rudolph II., 1570-1612,' narrating many of his experiences with the astrologers and charlatans that he patronized so liberally, and pointing out the important results that followed his support of Tycho Brahe and Kepler.

Dr. A. F. A. King read 'Further Remarks on Sunlight, Malaria and Scoto-therapy,' in which he reviewed his former paper (see SCIENCE, December 27, 1901, p. 1007), and in support of the blue fluorescence of quinine being its curative property, cited the facts that *esculin* and *fraxin* were also fluorescent and curative like quinine. The curative power of iodine was due to its producing the violet iodide of starch in the stomach.

Dr. King recommended blue- or violet-colored clothing for armies in malarious regions, and purple tents instead of the white canvas now used. He suggested several experiments in scoto-therapy—keeping some patients in the dark or in rooms with purple or indigo window glass, and exposing others, nude, to brilliant sunshine—which were inexpensive and easily accomplished, and which, he hoped, those having opportunities would try, in order